REMARKS

After entry of the above amendments, claims 1-6, 10-17 and 20-22 are pending in this application. Applicants have rewritten the limitations of claims 7-9 into claim 1 and the limitations of claims 18-19 into claim 11. Accordingly, claims 7-9 and 18-19 have been canceled as redundant. Claims 4, 6, 10, 14, 16, 20, 21 and 22 have also been amended. No new matter has been added.

Claim Objections

The claims were objected to because of informalities. Applicants thank the Examiner for his suggestions and have made appropriate corrections. No new matter has been added.

Rejections Under 35 U.S.C. § 112

Claims 4 and 14 were rejected under 35 U.S.C. § 112 as indefinite. The claim amendments presented herein overcome this rejection. No new matter has been added.

Rejections Under 35 U.S.C. § 102 and § 103

Claims 1-8, 10-18 and 20-22 were rejected under 35 U.S.C. § 102(b) as anticipated by Crater U.S. Patent No. 6,201,996. Claims 9 and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over Crater as applied to claims 1, 8, 11 and 18, in view of Fleischman U.S. Patent No. 6,507,847. Applicants respectfully traverse these rejections.

Applicants' FIG. 2 shows an embodiment for the web-based monitoring and control of a plurality of spatially distributed technical installations (e.g., remote control or monitoring devices) 3.1, 3.2, . . . 3.n, where a superordinate installation 1, called a client or web client, stores components that provide a uniform integral display S of the data/information in the distributed installations, combines the data/information into a uniform structure and displays them integrally in a user interface. The data/information interchange between the client 1 and the distributed installations 3.1, 3.2, . . . 3.n can be executed via communication links K and the web servers 2.1, 2.2, . . . 2.n that are present in the distributed installations 3.1, 3.2, . . . 3.n. The client 1 can be a typical web client with a web browser without any further special software.

FIG. 3 shows an exemplary overview of the architecture of the system. Using the communication links K, for example the Internet or an internal network, the web client 1 communicates with the web servers 2.1, 2.2, . . . 2.n of the distributed technical installations 3.1, 3.2, . . . 3.n. One or more applications 10 can be loaded into the web client 1 from a "home server" in a first installation 3.1, preferably upon operation for the first time and usually just once, for example as application programs for installation control with the associated user interfaces. The applications 10 use the communication links K to exchange data/information with the installations 3.1, 3.2, . . . 3.n and to request an integrated display S of the data from the installations 3.1, 3.2, . . . 3.n.

The applications 10 can use an integration layer 11, and connected representative services 12, 13, 14 on the client, which are known as proxies, and also the communication link K to communicate with the distributed installations 3.1,

3.2, . . . 3.n, for example in order to request data from the installations 3.1, 3.2, . . . 3.n or in order to transmit control signals to the installations 3.1, 3.2, . . . 3.n. The client proxies 12, 13, 14, which are typically provided for the client 1 to communicate with the installations 3.1, 3.2, . . . 3.n, are loaded from the appropriate web servers 2.1, 2.2 . . . 2.n of the distributed technical installations 3.1, 3.2, . . . 3.n and provide the communication link K between the client 1 and the web servers 2.1, 2.2 . . . 2.n of the installations 3.1, 3.2, . . . 3.n.

The client components, such as the proxies 12, 13, 14, the integration layer 11 and the client applications 10, are typically in the form of software components which are loaded, automatically installed and executed using standard web mechanisms, such as Microsoft Active-X Controls, Microsoft NET components or Java Applets.

The communication between the client 1 and the installations 3.1, 3.2, . . . 3.n, particularly the data requests or data calls, can be executed using a web service or using SOAP (Simple Object Access Protocol) calls, for example.

The data/information in the installations 3.1, 3.2, . . . 3.n, which are described by objects, also called data objects, are project data, measured values or states of the distributed installations 3.1, 3.2, . . . 3.n, for example, and are available in separate databases 21, 31, 41 in the installations 3.1, 3.2, . . . 3.n or are generated in real time, for example on the basis of the values measured by sensors. The data objects from the databases 21, 31, 41 are transmitted to the client 1 via the web server 2.1, 2.2, . . . 2.n of the respective installation 3.1, 3.2, . . . 3.n and the communication link K upon a request by the client 1.

The data objects stored in the databases 21, 31, 41 of the respective

installations 3.1, 3.2, . . . 3.n can have references 6 with pointers, known as system links 6, to data, structures and/or substructures for the other distributed installations 3.1, 3.2, . . . 3.n that are also called federated installations.

Applicants respectfully submit that the same combination of elements in Applicants' claims is neither disclosed nor suggested by Crater or Fleischman, viewed alone or in combination. For example, the Action (col. 9, lines 60-66), asserts that Crater discloses the claimed web client that includes applications and an integration layer. Applicants respectfully disagree. While the cited section in Crater arguably discloses a browser, there is no support for the claimed integration layer.

Applicants' integration layer 11 provides for the uniform conditioning and display of the data/information and includes resolution of the references 6 of the data loaded from the web servers 2.1, 2.2 . . . 2.n. In addition, the integration layer 11 uses the various proxies 12, 13, 14 to reload the data/information from the appropriate federated installations 3.2, . . . 3.n. The uniform display S of the data/information that this provides is then supplied to the client applications 10, particularly to the application programs and/or graphical user interfaces, and is displayed.

In addition, Applicants' integration layer 11 can preprocess the data requests from the client applications 10 in order to request the data from the respective proxies 12, 13, 14 and hence from the web servers 2.1, 2.2 . . . 2.n of the associated installations 3.2, . . . 3.n.

Applicants also respectfully disagree that Crater discloses the claimed "wherein the distributed installations store data structures with references, where the references contain pointers to data, structures and/or substructures in further

distributed installations and wherein the integration layer executes an evaluation of the pointers with further distributed installations recursively or cyclically and wherein abortion criteria are provided for purposes of avoiding continuous loops in a case of cyclic execution of the pointers." The cited section in Crater (col. 21, lines 36-40) only discloses that pointers to other controllers can present a viewer with data generated by different devices. However, there is no teaching or suggestion in Crater where the integration layer executes an evaluation of the pointers with further distributed installations recursively or cyclically. Moreover, the addition of Fleischman, which is cited only for a procedure to terminate a database search, does not cure the deficiencies of Crater.

Accordingly, claims 1 and 11 are patentable. This logic also disposes of the rejections of the remaining claims, which depend from claims 1 or 11.

Conclusion

For the foregoing reasons, Applicants respectfully submit that this application is in immediate condition for allowance and all pending claims are patentably distinct from the cited references. Reconsideration and allowance of all pending claims are respectfully requested.

In the event that there are any questions about this application, the Examiner is requested to telephone Applicants' undersigned representative so that prosecution of the application may be expedited.

If additional fees are required for any reason, please charge Deposit Account No. 02-4800 the necessary amount.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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